

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
6 January 2005 (06.01.2005)

PCT

(10) International Publication Number  
**WO 2005/000748 A1**

(51) International Patent Classification<sup>7</sup>: C02F 11/04

(21) International Application Number:  
PCT/DK2004/000462

(22) International Filing Date: 28 June 2004 (28.06.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
PA 2003 00978 27 June 2003 (27.06.2003) DK  
PA 2003 01166 14 August 2003 (14.08.2003) DK

(71) Applicant (for all designated States except US): BIO  
ENERGI APS I [DK/DK]; Hyldeholm 22, Veddelev,  
DK-4000 Roskilde (DK).

(72) Inventors; and

(75) Inventors/Applicants (for US only): JENSEN, Jan  
[DK/DK]; Hyldeholm 22, Veddelev, DK-4000 Roskilde  
(DK). JENSEN, Preben [DK/DK]; Spongsvej 24, Dyngby  
Strand, DK-8300 Odder (DK).

(74) Agent: JAKOBSEN, Gert, Høy; Albihns A/S, H.C. An-  
dersens Boulevard 49, DK-1553 Copenhagen (DK).

(81) Designated States (unless otherwise indicated, for every  
kind of national protection available): AE, AG, AL, AM,  
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,  
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,  
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,  
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,  
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,  
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,  
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,  
ZW.

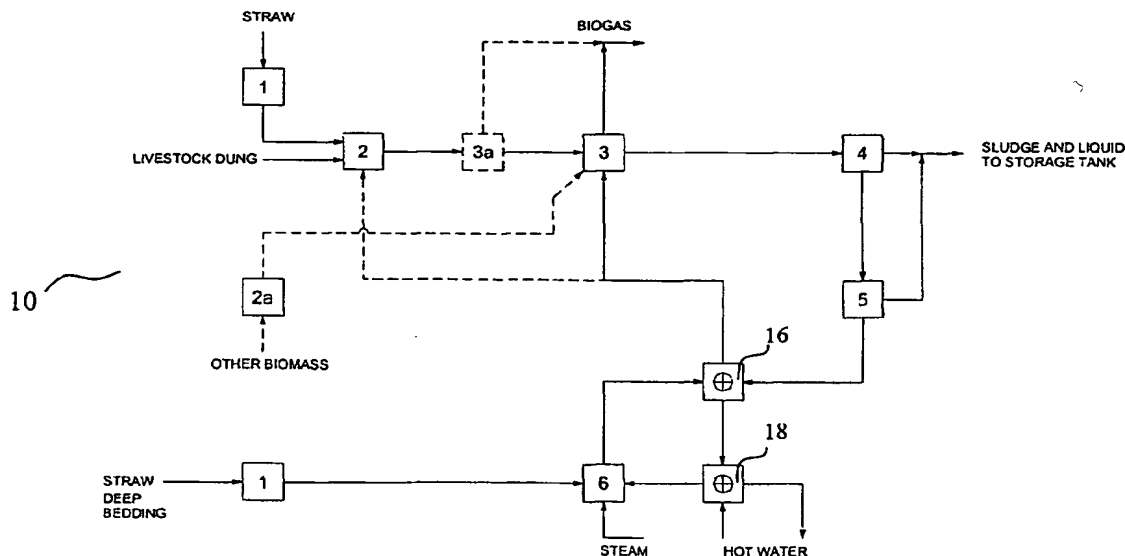
(84) Designated States (unless otherwise indicated, for every  
kind of regional protection available): ARIPO (BW, GH,  
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,  
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),  
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,  
FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI,  
SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,  
GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

[Continued on next page]

(54) Title: A BIOGAS PRODUCING FACILITY WITH ANAEROBIC HYDROLYSIS



(57) Abstract: The present invention relates to a method and a system for conversion of organic waste into biogas, i.e. a methane containing gas, with an improved efficiency and economy. The system comprises a reactor (3) for holding organic waste for production of biogas by digestion and having an output for digested waste, and an anaerobic tank (6) that is connected to the reactor (3) output for anaerobic hydrolysis of the digested waste and having an output for hydrolysed material that is connected to an input of the reactor for adding hydrolysed material to the content of the reactor. The anaerobic hydrolysis process makes the energy content of material that has not been digested in the reactor available for bacterial digestion and thus, the hydrolysed material is fed back into the reactor for further bacterial conversion into biogas.



— before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.